

Amendments to the Claims:

Please cancel claims 7, 10 and 36-38 without prejudice or disclaimer.

1. (Currently Amended) An electric high voltage AC machine for direct connection to a distribution or transmission network, said machine including at least one winding and having a neutral point and comprising at least one current-carrying conductor comprising a number of strands, only a minority of said strands being non-isolated from each other and a magnetically permeable, electric field confining covering surrounding the conductor; a first layer having semi-conducting properties surrounding the conductor and being in electrical contact therewith, a solid insulating layer surrounding said first layer, and an outer layer having semi-conducting properties surrounding said insulating layer, and grounding means for connecting the neutral point of said winding in circuit to ground.

2. (Previously Amended) The machine according to claim 1, wherein the potential of said first layer is substantially equal to the potential of the conductor.

3. (Previously Amended) The machine according to claim 1, wherein the potential of said first layer is substantially equal to the potential of the conductor.

4. (Previously Amended) The machine according to claim 3, wherein said second layer is connected to a predetermined potential.

5. (Previously Amended) The machine according to claim 4, wherein said predetermined potential is ground potential.

6. (Previously Amended) The machine according to claim 1, wherein at least two adjacent layers have substantially equal thermal expansion coefficients.

7. (Cancelled)

8. (Previously Amended) The machine according to claim 1, wherein said layers are adjacent to each other, and each of said layers has at least one connecting surface each being fixedly connected to the connecting surface of the adjacent layer along substantially the whole of said connecting surface.

9. (Previously Amended) An electric AC machine having a magnetic circuit for high voltage comprising:

a magnetic core and at least one winding, wherein said winding is formed of a cable comprising at least one current-carrying conductor and a magnetically permeable, electric field confining covering surrounding the conductor, each conductor having a number of conductor elements, and inner semi-conducting layer surrounding the conductor and being in electric contact with at least one of the conductor elements, an insulating layer of solid insulating material surrounding said inner semi-conducting layer, and an outer semi-conducting layer surrounding said insulating layer, and grounding means for connection to at least one selected point of said winding to ground.

10. (Cancelled)

11. (Previously Amended) The machine according to claim 9, wherein said grounding means comprise means for direct grounding of the winding.

12. (Previously Amended) The machine according to claim 1, wherein said grounding means comprise means for low-resistance grounding of the winding.

13. (Previously Amended) The machine according to claim 12, said machine having a Y-connected winding neutral point and wherein said low-resistance grounding means comprise a low-resistance resistor connected between the neutral point and ground.

14. (Previously Amended) The machine according to claim 12, said machine having a Y-connected winding the neutral point further comprising a transformer having a primary and a secondary winding and wherein said low-resistance grounding means comprises a resistor connected in the secondary of the transformer whose primary is connected between the neutral point and ground.

15. (Previously Amended) The machine according to claim 1, wherein said grounding means comprise means for low-inductance grounding of the winding.

16. (Previously Amended) The machine according to claim 15, said machine having a Y-connected winding the neutral point and wherein said low-inductance grounding means comprises a low-inductance inductor connected between the neutral point and ground.

17. (Previously Amended) The machine according to claim 15, said machine having a Y-connected winding neutral point, further comprising a transformer having a primary and a secondary winding and wherein said low-inductance grounding means

comprises an inductor connected in the secondary of the transformer whose primary is connected between the neutral point and ground.

18. (Previously Amended) The machine according to claim 1, wherein said grounding means comprise means for high-resistance grounding of the winding.

19. (Previously Amended) The machine according to claim 18, said machine having a Y-connected winding neutral point and wherein said high-resistance grounding means comprise a high-resistance resistor connected between the neutral point and ground.

20. (Currently Amended) The machine according to claim 18, said machine having a Y-connected winding neutral point further comprising a transformer having a primary and a secondary winding and wherein said high-resistance grounding means comprise a resistor connected in the secondary of the transformer whose primary is connected between the neutral point and ground.

21. (Previously Amended) The machine according to claim 1, wherein said grounding means comprise means for high-inductance grounding of the winding.

22. (Previously Amended) The machine according to claim 21, said machine having a Y-connected winding the neutral point and wherein said high-inductance grounding means comprises a high-inductance inductor connected between the neutral point and ground.

23. (Previously Amended) The machine according to claim 21, said machine having a Y-connected winding neutral point further comprising a transformer having a primary and a secondary winding and wherein said high-inductance grounding means comprises an inductor connected in the secondary of the transformer whose primary is connected between the neutral point and ground.

24. (Previously Amended) The machine according to claim 1, said machine having a Y-connected winding neutral point, further comprising a transformer having a primary and a secondary winding and wherein said grounding means comprises a reactor connected in the secondary of the transformer whose primary is connected between the neutral point and ground, said reactor having characteristics such that capacitive current during a ground fault is substantially neutralized by an equal component of inductive current contributed for by the reactor.

25. (Previously Amended) The machine according to claim 1, wherein said grounding means comprises means for changing the impedance of the connection to ground in response to a ground fault.

26. (Previously Amended) The machine according to claim 1, wherein said grounding means comprises an active circuit.

27. (Previously Amended) The machine according to claim 1, wherein said grounding means comprises a Y- Δ grounding transformer connected to the network side of the machine.

28. (Previously Amended) The machine according to claim 1, wherein said grounding means comprise a zigzag grounding transformer connected to the network side of the machine.

29. (Previously Amended) The machine according to claim 1, said machine having a Y-connected winding neutral point wherein said grounding means comprise a suppression filter tuned for the n:th harmonic.

30. (Previously Amended) The machine according to claim 1, said machine having a Y-connected winding neutral point wherein said grounding means comprise a switchable suppression filter detuned for the n:th harmonic.

31. (Previously Amended) The machine according to claim 29, wherein said n:th harmonic is the third harmonic.

32. (Previously Amended) The machine according to claim 1, said machine having a Y-connected winding neutral point wherein said grounding means comprise an overvoltage protector connected between said neutral point and ground.

33. (Previously Amended) The machine according to claim 1, said machine having a Y-connected winding neutral point wherein an overvoltage protector is connected between said neutral point and ground in parallel to said grounding means

34. (Previously Amended) A distribution or transmission network, which comprises at least one machine according to claim 1.

35. (Previously Amended) A high voltage electric machine comprising at least one winding, wherein said winding comprises a cable including at least one current-carrying conductor and a magnetically permeable, electric field confining covering surrounding the conductor including an inner semi-conducting layer surrounding the conductor and being in electrical contact therewith, a solid insulating layer surrounding the inner layer, and an outer semi-conducting layer surrounding the insulating layer, said inner and outer layers forming equipotential surfaces around the conductor, said cable forming at least one uninterrupted turn in the corresponding winding of said machine.

36. (Cancelled)

37. (Cancelled)

38. (Cancelled)

39. (Previously Amended) The machine of claim 35, wherein the cover is formed of a plurality of layers including an insulating layer and wherein said plurality of layers are substantially void free.

40. (Previously Amended) The machine of claim 35, wherein the cover is an electrical contact with the conductor.

41. (Original) The machine of claim 40, wherein the layers of the cover have substantially the same temperature coefficient of expansion.

42. (Previously Amended) The machine of claim 35, wherein the cover is heat resistant such that the machine is operable of 100% overload for two hours.

43. (Previously Amended) The machine of claim 35, wherein the machine, when energized, produces an electric field and the cover confines the electric field so that the cable is operable free of sensible end winding loss.

44. (Previously Amended) The machine of claim 35, wherein the machine, when energized, produces an electric field and the cover confined the electric field so that the winding is operable free of partial discharge and field control.

45. (Original) The machine of claim 35, wherein the winding comprises multiple uninterrupted turns.

46. (Original) The machine of claim 35, wherein the cable comprises a transmission line.

47. (Original) The machine of claim 35, wherein the cable is flexible.